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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,867	03/25/2004	Yoshiyuki Ikezaki	503038.108005	6661
29540	7590	01/04/2007		
DAY PITNEY LLP 7 TIMES SQUARE NEW YORK, NY 10036-7311			EXAMINER VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/808,867	IKEZAKI, YOSHIYUKI	
	Examiner	Art Unit	
	Anh T.N. Vo	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

FINAL REJECTION

CLAIM REJECTIONS

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 USC 103 (a) as being anticipated by in view of Childs et al (US 6,955,425) in view of Hara (US 4,631,558).

Childs et al. disclose in Figures 1, 3 and 6 an ink cartridge for use in an ink jet printing apparatus comprising:

- an inkjet head (52) that is driven to eject ink to a recording medium (not shown);
- a carriage (82) mounting the inkjet head (52), the carriage being reciprocally movable in a second direction which is perpendicular to the first direction;
- a movable ink tank (40) that is mounted on the carriage (82, Figure 3), the movable tank having an ink storing chamber, the ink tank having an ink introducing channel at a valve (36A) and an ink discharging opening (62), the ink stored in the ink storing chamber being discharged through the ink discharging opening 62) to the inkjet head (52);

at least one wall (122A, Figures 2 and 6) provided in the ink chamber, the at least one wall extending vertically from the inner bottom surface toward the top inner surface o divide the ink chamber, in the horizontal direction, into a plurality of rooms (44, 48), the plurality of rooms communicating with each other at upper portion (56) which are above an upper end of the at least one wall (122A), a first room (48), which is one of the plurality of rooms (48, 44), being

provided with the ink introducing channel, and a second room (44) being provided with the ink discharge opening (62); and

- wherein each room of the plurality of rooms other than the first room (48) has a cross-sectional area in the second direction within a predetermined vertical range equal to or less than the first room, the predetermined vertical range is the distance from the top end of the at least one wall to the top inner surface of the ink storing chamber.

However, Child et al does not disclose that the wall (122A) extends vertically from the inner bottom surface toward the top inner surface along the first direction .

Nevertheless, Hara suggests in Figures 1-4 a partitioned walls (30a-1 to 30a-3) extend vertically from the inner bottom of the reservoir (16) toward the top inner surface along the first direction of the medium for damping disturbance of ink when the carriage is driven to travel, see lines 45-54, column 1.

It would have been obvious to a person having skill in the art at the time the invention was made to rearrange the partitioned walls of Child et al as suggested by Hara for the purpose of damping disturbance of ink when the carriage is driven to travel.

Claims 2-20 are rejected under 35 USC 103 (a) as being unpatentable over Childs et al (US 6,955,425) in view of Hara (US 4,631,558) as applied to claim 1 and further in view of Tsukada (JP Pat. 20011328279) and Erickson (US Pat. 6,164,766).

Childs et al. in view of Hara discloses the basic features of the claimed invention were stated above but do not disclose the at least one second room other than the first room has a cross-sectional area below the predetermined vertical range measured in the second direction and from the upper end of the at least one wall to inner bottom surface of the ink storing chamber of the movable ink tank greater than the cross-sectional area within the predetermined vertical range measured in the second direction and from the upper end of the at least one wall to the top inner surface of the ink storing chamber; sectional areas within the predetermined vertical range

of the plurality of the rooms other than the first room measured in the second direction and from the upper end of the at least one wall to the top inner surface of the ink storing chamber are equal to or smaller than the cross-sectional area within the predetermined vertical range of the first room; wherein at least one room of the plurality of the rooms other than the first room has a vertical range, in the vicinity of the upper end of the at least one wall, in which the horizontal cross-sectional area is fixed; wherein the at least one second room has a vertical range, below the predetermined vertical range, in which the horizontal cross-sectional area increases toward a lower portion thereof; and a stationary ink tank which does not move when the carriage moves; and a tube member that connects the stationary ink tank and the movable ink tank to allow the ink to be supplied from the stationary ink tank to the movable ink tank.

Nevertheless, Tsukada et al. disclose in Figures 1-4 and 8 a liquid container comprising:

- an ink cartridge (194) having a partition (212c) that divides an ink chamber into at least one first room (213a) and at least one second room (213b);
- a horizontal cross-sectional area of the at least one second room (213b) below the predetermined vertical range is greater than the horizontal cross-sectional area thereof within the predetermined vertical range;
- wherein horizontal cross-sectional areas of the plurality of the rooms (213a, 213b) other than the first room (213a) below the predetermined vertical range are greater than the horizontal cross-sectional areas thereof within the predetermined vertical range;
- wherein at least one room of the plurality of the rooms other than the first room has a vertical range, in the vicinity of the upper end of the at least one wall, in which the horizontal cross-sectional area is fixed; and
- wherein the at least one second room (213b) has a vertical range, below the predetermined vertical range, in which the horizontal cross-sectional area increases toward a lower portion thereof.

Furthermore, Erickson discloses in Figures 1-3 an ink refill system comprising

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a stationary ink tank (14) which does not move when the carriage (4) moves; and a tube member (60) that connects the stationary ink tank (14) and the movable ink tank (12) to allow the ink to be supplied from the stationary ink tank (14) to the movable ink tank (12).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Tsukada et al. and Erickson in the ink jet printing apparatus of Child et al for the purpose of supplying ink to the ink cartridge from the stationary ink tank with a negative pressure condition.

Noted that, although Child et al does not specify a particular printer in which the cartridge is to be used so that the storing chamber of the cartridge is oriented length-wise in the first direction as claimed; however, the dimension of the chamber is determined by the size and shape of the predetermined device in which the cartridge of Child et al is to be used. Thus, selecting the dimension of the chamber as claimed is considered to be a mechanical design expedient for an engineer. It would have been obvious to a person having skill in the art at the time the invention was made to select the dimension of the chamber of Child et al as claimed for the purpose of accommodating with the size and shape of a predetermined printer.

Response to Applicant's Arguments

The applicant argues that the partitioned wall structure (122A) of Child is aligned in a direction parallel to the reciprocating direction, not perpendicular to the first direction. The argument is persuasive. However, this limitation is suggested in the Hara reference as stated above.

CONCLUSION

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

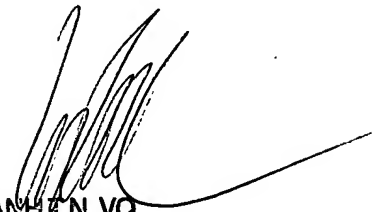
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo. whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M..

The fax number of this Group 2800 is (571) 273-8300.


ANH T.N. VO
PRIMARY EXAMINER
December 21, 2006